

VIRSÍK, K., MUDr.

The great task of elimination of tuberculosis as a disease of masses. Česk. zdravot. 4 no.2:61-66 Mar. 1956.

1. Oblastný ftiseológ Krajská nemocnica tuberkulózy, Podunajské Biskupice.

(TUBERCULOSIS, prevention and control,
in Czech)

--VIRSIK K. Tuberculoza u studentov na bratislavských vysoluch slolach Tuberculous among students in Bratislava Slovensky Lenkar, Bratislava 1949, 11/15 (387-387) Graphs 1 Tables 4

The university students in Bratislava showed 6.11% tuberculosis morbidity. Bilateral processes were found in 74.6% of tuverculosis, open (EK direct positive) in 10.6% and active 23,8%. Medical students were the most affected, male 5.8%, females 8.5%.
Graubner--Plzen (XV, 4)

SO: Medical Microbiology and Hygiene Section Iv, Vol. 3, No. 7-12

VIRSIK, Karol

Organization of province center for the treatment of tuberculosis in Podunajske Biskupice. Probl.tub. 37 no.8:22-23 '59.

(MIRA 13:6)

1. Direktor Oblastnoy bol'nitsy po lecheniyu tuberkuleza v Podunayskikh Biskupitsakh, Chekhoslovakiya.
(TUBERCULOSIS hosp. & clin.)

VIRSIK, K.; KLIMENT, V.

Pregnancy and pulmonary tuberculosis. Lek. obzor 3 no.11:639-658
1954.

1. Z krajskej nemocnice tbc v P.Biskupiciach, a II. porodnickej
kliniky LFSSU v Bratislave.
(PREGNANCY, in various diseases
tuberc., pulm.)
(TUBERCULOSIS, PULMONARY, in pregnancy)

VIRSIK, K.; BAJAN, A.; LIBIK, D.; LITOMERICKY, S.; VAGAC, M.;
KOKOLEVSKA, A.

Results of tuberculin screening tests in pregnant women.
Bratisl. lek. listy 43 Pt. 2 no.63313-317 '63.

1. Ftizeologicka katodra SUDL v Pod. Biskupciach, riaditel
MUDr. K. Virsik.

(TUBERCULIN REACTION) (TUBERCULOSIS)
(PREGNANCY COMPL, INFECTIOUS)

VIRSIK, Karol, dr.

Epidemiology of tuberculosis and principal tasks in tuberculosis control in Czechoslovakia. Tuberkulozis 14 no.8:228-231 Ag '61.

1. A Podunajske Biskupice-i megyei tbc korhaz kozlemenye.

(TUBERCULOSIS prev & control)

BC

8-I-8

Treatment of sulphur ores with chlorine. K. I. Lauer and H. G. Lauer (Klin. Chem. Z., 1964, 11, 67-70).—The ore is treated with Cl_2 at 140–180°, when 97% of the S is converted into SO_2 , 80 and 83, 26% of S present is applicable to even sulphurizing. 3–9% of S. The S is best recovered by the action of steam on the chlorination product, but about 25% is lost as SO_2 and SO . R. T.

Addition of active carbon to sugar juice before evaporation. N. I. KONOLOV, G. K. VIKHAI, and N. A. KRYVONOSHIRO (Trans. Centr. Sci. Res. Inst. Sugar Ind. U.S.S.R., 1964, No. 20, 90-112).—The amount of C used is 0-4% of the wt. of the sugar treated. Formation of melanoid is thereby decreased. *Ch. Abstr. (p)*

1ST AND 2ND COILS																										3RD AND 4TH COILS																									
PROCESSING AND PROPERTY INDEX																										PROCESSING AND PROPERTY INDEX																									
<p>Accumulation of color in massecuite during boiling. L. E. Pleishman and G. K. Virskaya. <i>Nash. Zapiski Tshukrov. Prom.</i> 10, No. 33, 121-7(1963). -The color of sugar depends on the amt. and quality of nonsugars. With a high nonsugar content in the massecuite the color of the sugar increases. A decrease of one hr. in boiling time decreases color of the sugar by 22%. White and green strips used for boiling and also as feed liquor increase the color of sugar.</p> <p style="text-align: right;">V. R. Baikov</p>																																																			
<p>ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			

BC

Accumulation of colour in manuscute during boiling. L. E. FLEMMING and G. K. YERKAYA (Nauk. Zapiski Truk. Prom., 1933, 10, No. 33, 121--127).—
Colour increases with the non-sugar content. A decrease of 1 hr. in boiling time decreases the colour by 25%. White and green syrups used for boiling and as feed liquor increase the colour of sugar. Ch. Ass.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220	1221	1222	1223	1224	1225	1226	1227	1228	1229	1230	1231	1232	1233	1234	1235	1236	1237	1238	1239	1240	1241	1242	1243	1244	1245	1246	1247	1248	1249	1250	1251	1252	1253	1254	1255	1256	1257	1258	1259	1260	1261	1262	1263	1264	1265	1266	1267	1268	1269	1270	1271	1272	1273	1274	1275	1276	1277	1278	1279	1280	1281	1282	1283	1284	1285	1286	1287	1288	1289	1290	1291	1292	1293	1294	1295	1296	1297	1298	1299	1300	1301	1302	1303	1304	1305	1306	1307	1308	1309	1310	1311	1312	1313	1314	1315	1316	1317	1318	1319	1320	1321	1322	1323	1324	1325	1326	1327	1328	1329	1330	1331	1332	1333	1334	1335	1336	1337	1338	1339	1340	1341	1342	1343	1344	1345	1346	1347	1348	1349	1350	1351	1352	1353	1354	1355	1356	1357	1358	1359	1360	1361	1362	1363	1364	1365	1366	1367	1368	1369	1370	1371	1372	1373	1374	1375	1376	1377	1378	1379	1380	1381	1382	1383	1384	1385	1386	1387	1388	1389	1390	1391	1392	1393	1394	1395	1396	1397	1398	1399	1400	1401	1402	1403	1404	1405	1406	1407	1408	1409	1410	1411	1412	1413	1414	1415	1416	1417	1418	1419	1420	1421	1422	1423	1424	1425	1426	1427	1428	1429	1430	1431	1432	1433	1434	1435	1436	1437	1438	1439	1440	1441	1442	1443	1444	1445	1446	1447	1448	1449	1450	1451	1452	1453	1454	1455	1456	1457	1458	1459	1460	1461	1462	1463	1464	1465	1466	1467	1468	1469	1470	1471	1472	1473	1474	1475	1476	1477	1478	1479	1480	1481	1482	
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	--

OPEN		CLOSED		OPEN		CLOSED	
MATERIALS INDEX		PROPERTY INDEX		MATERIALS INDEX		PROPERTY INDEX	
<p>STRUCTURE-MECHANICAL PROPERTIES OF COAGULATES. II. Sediment volume and rate of density increase of the coagulates of arsenic trisulfide and iron oxide. B. G. Zaprometov and G. M. Virskaya. <i>Kolloid. Zhur.</i> 10, 239-48 (1948); cf. <i>C.A.</i> 34, 6909. The vol. V of As_2S_3 ppt. decreases for hours after coagulation. The rate of decrease is greatest for coarsest sols (av. particle size $d = 97 \text{ m}\mu$). If coagulants are compared in the concn. C causing coagulation within 24 hrs., K^+ causes a greater v than Ba^{++} or Al^{+++}, and v increases in the order $\text{Fe}(\text{CN})_6^{4-}$ ---- $< \text{SO}_4^{--} < \text{NO}_3^- < \text{Cl}^-$. C usually increases in the order $\text{AlCl}_3 < \text{Al}(\text{NO}_3)_3 < \text{BaCl}_2 < \text{Ba}(\text{NO}_3)_2 < \text{KCl}$, $\text{K}_2\text{SO}_4 <$ $\text{KNO}_3 < \text{K}_4\text{Fe}(\text{CN})_6 < \text{LiNO}_3$. The final vol. V_f is the concn. of the added Ba or Al salt decreases; thus the mechanism of coagulation is different for uni- and multivalent ions. Near C_f, multivalent ions yield greater V_f than univalent ions; this effect is greatest for the finest sol ($d = 26 \text{ m}\mu$). Such sols behave similarly. Coagula- tion of Fe_2O_3 sols causes formation of 2 liquid layers, and the vol. V_f of the lower layer decreases more slowly than V_f of As_2S_3. On adding increasing amts. of Li_2SO_4, MgSO_4, or K_2PO_4, V_f decreases in the beginning but in- creases during the later part of sedimentation. The V_f decreases when the concn. of the coagulant increases and the hydration of coagulating ions decreases. Al_2O_3 sols behave similarly to Fe_2O_3. J. J. Bikerman</p>				<p>2</p>			
<p>ASH-S-6 METALLURGICAL LITERATURE CLASSIFICATION</p>							
<p>SEARCHED</p>				<p>INDEXED</p>			
<p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100</p>				<p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100</p>			

AKHMEDOV, R.S. *et al.*, No. SAIDOV, I.

Formation of maximum shearing stress in polyvinyl chloride gels over a period of time and as a result of the addition of plasticizers.
Nash. trudy Tashkent. Khim. nauch. no. 12:75-77 '64.

(MIRA 28:8)

VIRSKAYA, C.M.; AKHMELOV, A.S.; ISLAKHOVICH, A.

Temperature dependence of the swelling of polyvinyl chloride in
diethyl oxalate and its mixture with dichloroethane. Nauch.trudy
TashSU no.257. Khim.nauki no.12:73-81, 1964.

(MIRA 1968)

VIRSKAYA, G.M.; AREF'YEVA, M.M.

Colloids of cottonseed hull hydrolyzates. Uzb. khim. zhur.
no.1:45-51 '60. (MIRA 14:4)

1. Sredneaziatskiy gosuniversitet imeni V. I. Lenina.
(Colloids) (Cottonseed)

VIRSKAYA, G.M.; AKHMEDOV, K.S.; DAMINOVA, M.

Swelling and dissolving of polymer powders in vapors and liquids. Uzb.khim.zhur. no.5:35-37 '59. (MIRA 13:2)

1. Sredneaziatskiy gosuniversitet im. V.I.Lenina.
(Polymers) (Ethylene)

VIRSKAYA, G.M.; AKHMEDOV, K.S.; GNEZDILOVA, R.A.

Swelling and dissolving of polyvinyl chloride powder in dichloro-
ethane and dioxane. Uzb.khim.shur. no.6:35-39 '58.

(MIRA 12:2)

1. Sredneaziatskiy gosudarstvennyy universitet im. V.I.Lenina.
(Ethylene) (Ethane) (Dioxane)

VIRSKAYA, G. I.

USSR/Chemistry Colloids Coagulation

Sept 11 49

"Structural and Mechanical Properties of Coagulates: II, Sizes of Precipitates and the Rate of Thickening of the Coagulates of Arsenic sulfide and Ferric Oxide," E. G. Zaprometov, G. I. Virskaya, Cen Asia State U, Lab of Colloid Chem, Tashkent, 10 pp

"Kolloid Zhur" Vol X, N 5

Sizes of coagulates from hydrosols of As_2S_3 rise as valency of either ion of the coagulant is increased, increasing degree of dispersion. Increase in concentration of potassium salts leads to more voluminous precipitates, while with Fe or Al salts a reverse effect (contraction) is observed. If concentration of coagulant is raised, coagulate has a looser structure in first stage, but a higher density in final stage

PA 2/50T37

ZAPHOMETOV, B.G.; VIRSKAYA, G.M.; SHPILEVSKAYA, I.N.

Sorptive activity of mixed sorbents. Trudy SAGU no.27:13-24 '51.
(MLRA 9:5)

(Sorbents)

BC

2-1

Preparation of carbon by electrolysis of the fused salts. S. L. GONCHAROVA and A. R. ZHUKI (J. Appl. Chem. Russ. 1955, 28, 44-46). This is obtained by a modification of Biliy and Zvonko's method (1952, 1953). or for non R. T.

ASD-SLA DETAILING LITERATURE CLASSIFICATION

VIRSKIY, A.A.

Method for studying slope asymmetry. Nauch. zap. Vor. otd. Geog.
ob-vazh. 60-64 '63. (MIRA 17:9)

VIRSKIY, A.A.

Development of the main water divide in the central part of the
Central Russian Upland. Izv.Vor.otd.Geog.ob-va no.3:101-110 '61.
(MIRA 15:11)

(Central Russian Upland--Erosion)

VIRSKIY, A.A.

Ercsion complex and its development, Izv. vses. geog. ob-va 92
no.6:473-481 N-D '60. (MIRA 14:1)

(Erosion)

11449

11.10.1949

kol' «Kombinirovannoe» naklona v formirovani struktury rel'yefa.

Trudy Vtorogo Vsesoyuz. geogr. s"yezda. T. I.M., 1948, s. 152 - 61

30: Ietopis' Zhurnal'nykh statey, No. 29, Moskva, 1949

VIRSKIY, A.A.

Course of development of erosion relief of plains. Geog. sbor. 1:25-35
'52. (MLRA 6:7)

(Physical geography)

VIRSKIY , A. A.

Virskiy, A. A. - " How American geomorphologists understand the erosion process and how it takes place in actuality," Izvestiya Voronezhsk. gos. ped. in-ta, Vol. X, Issue 2, 1948, p. 57-87 --- Bibliog: 18 items

So: U-3566, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 13, 1949)

VIRT, Svatopluk

Nephelometric determination of the thymol test. Cas. lek.
cesk. 94 no.44:1200-1201 28 Oct 55.

1. Ustredni laborator Zavodniho ustavu nar. zdravi Zavodu
V. I. Lenina, Plzen.

(CHEMICAL ANALYSIS

nephelometry in thymol turbidity test.)

(THYMOL

turbidity test, nephelometric determ.)

LAVICKA, J.; BLAHOS, J.; BRABENCOVA, H.; SITAJ, S.; VIRT, S.;
MIKUS, F.; KRESANEK, E.; Spolupracovali: MESTAN, J., MUDr.,
SFN - transfuzni stanice, Praha 10; KULICH, VL., MUDr.,
TS - Plzen; DZAVIK, VL., MUDr., TS Gelnica; ZOLLNAYOVA,
Trencin, MUDr.; Laboratorni prace: PREUSOVA, H.; NOVAKOVA, A.;
LUSKOVA, K.

Normal levels of blood uric acid in various regions of Czecho-
slovakia. Cas. lek. cesk. 102 no.34:937-941 23 Ag '63.

1. Klinika chorob vnitrnich lekarske fakulty KU v Plzni, pred-
nosta prof. dr. K. Bobek Vyzkumny ustav endokrinologicky v
Praze, reditel doc. dr. K. Silink Vyzkumny ustav chorob rev-
matickych v Piestanech, reditel doc. dr. S. Sitaj Interne
oddelenie OUNZ, Gelnica, veduci MUDR. F. Mikus.
(URIC ACID) (BLOOD CHEMICAL ANALYSIS)

VIRT, S.

EXCERPTA MEDICA Sec.2 Vol.9/9 Physiology, etc. Sept 56

3937. VIRT S. Ústřední Lab. Závodního Ústavu nár. zdraví Závodů. *Nefelometrické měření thymolového testu. Nephelometric measurement of the thymol test ČAS. LÉK. ČES. 1955, 94/44 (1200-1201)

The usual thymol turbidity test is read in a Zeiss Pulfrich nephelometer.

Heyrovský - Prague

VIRT, Svatopluk

med Nephelometric measurement of the ~~total~~ turbidity
test. Svatopluk VIRT (Zlavedy V. I. Lenina, Písek, Czech.).
Časopis Lékařů Českých 94, 1260-1(1955).—Zeiss nephelometer which has been adapted from a usual Füllrich photometer is used for the measurement of the thymol turbidity test. The procedure is facilitated by the use of gray filters. Calibration is made with the usual NaSO₄ standard.
I. M. Hais

SAMAN, K.; LAHN, V.; VIRT, S.; technicka spoluprace SPEVACKOVA, J.

Excretion of 5-hydroxyindolacetic acid in glaucoma patients. Cesk.
ofth. 17 no.7:487-494 N '61.

1. Oční klinika lékařské fakulty KU v Plzni, přednosta prof. dr.
R. Knobloch Interní klinika lékařské fakulty KU v Plzni, přednosta
prof. dr. K. Bobek.

(GLAUCOMA urine) (INDOLACETIC ACID urine)

VIRTA, Nik.; ANTIPINA, L., red.; KURIYKOVA, L., tekhn. red.

[Powerful grain] Moguchee zernyshko. Moskva, Izd-vo "Molodaia
gvardiia," 1961. 15 p. (MIRA 14:9)

(Grain)

VIRTA, Nik.; ANTIPINA, L., red.; KURLYKOVA, L., tekhn. red.

[Desired water] Zhelannaia voda. Moskva, Izd-vo "Molodaia
gvardiia," 1961. 16 p. (MIRA 15:1)
(Irrigation)

100 AND 200 SERIES										100 AND 200 SERIES									
PROCESSING AND PROPERTIES INDEX																			
BC										B-III-4									
<p>Importance of p_2 in the design problem. A. I. YEREMENKO and H. K. KERNER (Odesk. State Univ. Lab. Carlsberg, 1988, 22, 200-205). Mainly a review. The importance of taking into account the time of settling as well as subject to p_2 is emphasized. J. N. A.</p>																			
100-100 METALLURGICAL LITERATURE CLASSIFICATION										100-100 METALLURGICAL LITERATURE CLASSIFICATION									
100-100 METALLURGICAL LITERATURE CLASSIFICATION										100-100 METALLURGICAL LITERATURE CLASSIFICATION									

C6

12

Processes and Properties - Misc.

Disappearance of acetylmetilcarbinol and biacetyl caused by microorganisms. A. J. Vittanen and P. Kontio. *Helsingin Karjantaloustieteiden Seuran Keskusteluja*, No. 8, English summary; Dairy Sci. Abstracts 2, No. 1, 52 (May, 1940).—Three hundred-ml. portions of milk were autoclaved, 42 to 53 mg. of biacetyl or 33 to 58 mg. of acetylmetilcarbinol added, inoculated with various organisms isolated from butter, and incubated at 19 to 21° for 70 or 100 hrs. *B. pasteurianus* destroyed about 90% of both compds. and *R. ruber* destroyed the same amt. of the acetylmetil-

carbinol but only 40 to 60% of the biacetyl. A nonproteolytic coccus and *B. fluorescens* destroyed 30 to 50% of the biacetyl but only 0% of the carbinol. A mixt. of yeasts destroyed 30 to 40% of the biacetyl and up to 30% of the carbinol.
C. L. B.

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

BC

B-III-1

Preservation of potato haulm. A. I. VIKARIAN
(Karkkainen, 1964; pp. 408—409; Comm. Zool., 1966;
A, 776).—Good silage is prepared by the A.I.V. method
from potato haulm. For dairy cattle up to 50 kg daily
may be fed without disturbance of health conditions.
A. O. P.

ca 14

PROCESSES AND PROPERTIES INDEX

A new method for purification of water. ARTTURI I. VIRTANEN AND H. KARSTROM
Valio Laboratorion Juhkassa 1929, 8 pp. (Sep. Mitt. aus dem biochem. Labor. von
Valio). *Chem. Zentr.* 1929, II, 92. If a water rich in bacteria is made alk. to pH 10.8-
11.1 by addn. of alkali, the gelatin-liquefying germs of *Bacterium pasteurianum* and *fluores-
cens* as well as of the *coli-aerogenes* group are killed completely within 1-1.5 hrs. After
neutralization with HCl the water contains only an additional 0.04% NaCl, thus an
unfavorable influence on the taste is not produced by this cheap degermination. G. S.

AND S.E. DETAIL ORG. LITERATURE CLASSIFICATION

ca

112

Excretion of *L*-aspartic acid from the root nodules of leguminous plants. Artturi I. Virtanen and T. Laine. *Suomen Kemistilehti* 106: 32(1957) (in English).—The major part of the amino N exd. from quartz sand culture of inoculated peas before flowering is *L*-aspartic acid N while if the peas are almost mature, chiefly β -alanine is found in the culture. E. E. Jukkola

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

CA

The effect on plant growth of substances which lower the oxidation-reduction potential. Anttoni I. Virtanen and Brundage Robert v. Hansen (Helsinki Inst. Teknol., Finland). *Z. Pflanzenkrankh. Pflanzeng. u. Bodenb.* 43, 11-22 (1940); cf. *C.A.B.* 43, 58577. In expts. with cotyledon-free peas in nutrient soln. with nitrate as N source growth is very poor. Addn. of ascorbic acid (1) (100-200 mg per plant in 1 l. of nutrient soln.) gives a growth comparable to normal plants. With $(NH_4)_2SO_4$ as N source on endosperm-free wheat, 1 is ineffective. It is believed that the effect of 1 on plant growth depends upon its reducing effect on nitrates. Other reducing compds., i.e., glutathione, cysteine, and Na_2S , were tested on cotyledon-free peas and showed results comparable with 1. It is possible that 1 functions as a H donor and the -SH compds. reduce the dehydro-1. Thus, the addn. of -SH compds. may result in more effective use of the small amt. of 1 present in the cotyledon-free embryo. C. K.

COMMON ELEMENTS										PROCESS AND PROPERTIES INDEX										COMMON ELEMENTS									
MATERIALS INDEX										COMMON ELEMENTS										COMMON ELEMENTS									
<p>CA</p>										<p>Formation of cadaverine from lysine. Arturi I. Viraness and T. Laine. Suomen Kemistilehti 9B, 17-18 (1966) (in English).—Cadaverine is produced from lysine by a strain of <i>B. coli</i> and also by <i>B. pasteurii</i> <i>Agarofaciens</i>. Lysine probably is an excretion product of leguminous root nodules and it is possible that cadaverine is formed in the soil during the growth of legumes. E. E. J.</p>										<p>11C</p>									
<p>ASB-ELA METALLURGICAL LITERATURE CLASSIFICATION</p>																													
<p>10000 10000 10000 10000 10000 10000 10000 10000 10000 10000</p>										<p>10000 10000 10000 10000 10000 10000 10000 10000 10000 10000</p>										<p>10000 10000 10000 10000 10000 10000 10000 10000 10000 10000</p>									

// D

CA

Influence of reducing substances on the reduction of nitrate in normal pea plants. Artturi J. Virtanen and Synnøve Sæbø-v. Hausen (Biochem. Inst., Helsinki, Finland) *Skandin. Kemistiskt 21B*, 63 (1950) (in English); cf. C. I. 44, 4921c. In a normal pea plant grown on nitrate N, considerable accumulation of nitrate occurs unless ascorbic acid be added to the nutrient. This indicates that during germination of the pea reducing substances (ascorbic acid, glutathione, mercaptans) are not formed in optimum ams., which explains why pea growth is improved by addn. of ascorbic acid. (C) Sprengling

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

1ST AND 2ND ORDERS

PRECEDENCE AND PRIORITY

CR

Formation of β -alanine from aspartic acid through the legume bacteria. Artturi I. Virtanen and T. Laine. *Suomen Kemistilehti* 108, 2(1937)(in English).—The authors have shown that lysine is not excreted from the nodules of leguminous plants as previously assumed. They have shown that the root-nodule bacteria split off CO_2 from aspartic acid to produce β -alanine. E. R. Jukkola

115

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

PRECEDENCE AND PRIORITY

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

1ST AND 2ND COLUMNS																										3RD AND 4TH COLUMNS																									
COMMON ELEMENTS																										COMMON TABLET NUMBER																									
<p>CA</p> <p>PROCESSES AND PROPERTIES INDEX</p> <p>12</p> <p>Fermentation taste of butter. ARTTURI J. VIRTANEN. <i>Valion Laboratorien Juhlai- nsja</i>, Separate 1929, 12 pp.; <i>Chem. Zentr.</i>, 1929, 11, 361.—Some butter samples from a certain dairy had a fruit-like odor and a putrid and fruit-like taste. In other samples a vinegar-like taste was observed. Gelatin-liquefying bacteria, apparently <i>B. punctatum</i>, which on sugar-free gelatin soon produced a pronounced odor of fruit ester, were the cause of the 1st phenomenon. They were also found in the water used. The examen. of the strongly acid butter yielded, in addn. to a large amt. of yeast, these bacteria, which, however, soon died because of their sensitiveness to acid. It was further found that the disturbances only occurred with butter which was slightly salted or not at all. Re- lief is brought by pasteurization of the dairy water, at least during prolonged rainy peri- ods, when the surface water can penetrate to the ground water. G. Schwach</p> <p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p> <p>62 1. 1</p>																																																			
62085 4																										62085 4																									
62085 4																										62085 4																									

VIRTANEN, O. Erik

chem Abs

u.48 25 Jan 54

Microbiology

The biochemistry of penicillin formation. O. Erik
Virtanen. Suomen Kemistilehti 26A, 117-28(1953).—A
rev production methods and recent literature.

VIRTEJ, Constantin

A new group of apprentices stepping into life. Constr Buc 14 no.649:
4 16 Je '62.

1. Scoala profesionala de ucenici no.1, Turda.

GOLOVNINA, M.V. [Golovnina, M.V.], prepodavatel'; CHERNITSKAYA, M.V.
[Charnyts'ka, M.V.], prepodavatel'; RUEDA, O.Ya., prepodavatel';
PANCHENKO, Z.P., prepodavatel'; OLEYNIKOVA, G.P. [Oleinykova,
H.P.], prepodavatel'; VIRTAL, L.M., prepodavatel'; YAMPOL'SKAYA,
A.M. [Iampol's'ka, A.M.], prepodavatel'; ALEKHNO, S.T., prepoda-
vatel'; OKREPILOVA, E.P. [Okrepylova, IE.P.], prepodavatel';
SIMONENKO, Ye.M. [Symonenko, M.M.], prepodavatel'; TSIGEL'MAN,
F.M., prepodavatel'; SHCHEPELYAYEVA, O.P. [Shchepeliaieva, O.P.],
prepodavatel'; ZAIKA, N.P., prepodavatel'; BARSUKOVA, M.M.,
prepodavatel'; IZAROVA, N.O., prepodavatel'; IVCHENKO, T.P.,
prepodavatel'; NEKRASOVA, K.S., prepodavatel'; ALEKSEYEVA, P.O.
[Aleksieieva, P.O.], prepodavatel'; GAVRILOVA, G. [Havrylova, H.],
red.; GORKAVENKO, L. [Horkavenko, L.], tekhn.red.

[Dressmaking] Krii ta shyttia. Vyd.6, perer. i dop. Kyiv,
Derzh.vyd-vo tekhn.lit-ry URSR, 1960. 692 p.

(MIRA 14:2)

(Dressmaking--Pattern design)

(Sewing)

VIRTELI, George; POPESCU, Nicolae

Moral wear of the means of production, and state of the machines
and equipment in iron foundries. Metalurgia constr mas 13 no.9:
807-812 S '61.

(Machinery in industry) (Labor productivity)
(Iron founding)

VIRTS, G

USSR/ Chemistry - Crystallization

Card 1/1 : Pub. 145 - 7/10

Authors : Virts, G.

Title : Remark on the method of fine crystallization of binary magnesium nitrates of rare earth elements

Periodical : Zhur. anal. khim. 9/5, 299-303, Sep-Oct 1954

Abstract : The effect of the crystallization method of the effectiveness of fractionating cerite-earth mixtures, during fine crystallization of magnesium nitrates, was investigated. The splitting of cerite earth into less soluble Nd, Pr, La and better soluble Sm was quantitatively determined by means of radioactive Eu. Three crystallization methods are described. The third method, consisting of priming the hot solution and chilling during intensive mixing, was found to offer the most effective fractionation. Fine crystallization makes possible rapid elimination of Sm elements from cerite. Two USSR references (1951 and 1952). Tables.

Institution :

Submitted : May 13, 1954

VIRU, J.

Methods of calculating the labor resources of the collective farms. p.492

SOTSIALISTLIK POOLUMAJANDUS. Tallinn, Estonia. Vol. 14, no. 11, June 1959

Monthly List of East European Accessions (EEAI), LC. Vol. 8, No. 9, September 1959
Uncl.

VIRUBOV, D. N., BLUDOV, V. P., et al

"General Heat Technology" Gosenergoizdat, Moscow (1948)

A-1

PC

Determination of small quantities of blennium
in organic substances without decomposing
them. H. A. Vassilovskii and G. L. Efremova (Ukraine,
Chem. Z., 1960, 5, 1861; p. 278-282). The organ is
oxidized, and 20 g. of the mixture are suspended in
water, 0.5 Gm. of hydrochloric acid and 5 c.c. of 1%
sodium chloride are added, and the mixture is boiled
for 1 hr. with a copper plate (5 cm. x 2 cm. sq. Bk.). The
plate is then washed and dissolved in nitric acid, and
the solution is neutralized by addition of ammonia.
12-15 drops of dilute hydrochloric acid are added, and
it is heated at 100° for 1 hr. The precipitate of
blennium oxychloride is washed and dissolved in
nitrogenous acid, and 10 drops of 4% sodium arsenite
and 3 c.c. of 10% iodine in potassium iodide solution
are added. The color obtained is compared with
that of a standard, and the blennium content is hence
calculated. The method serves for the detection of
0.5 mg. of blennium per 100 g. of organ, and for the
determination, with an error of ±1%, of 2-10 mg.
per 100 g. of organ.

ASB-ELA METALLURGICAL LITERATURE CLASSIFICATION

EDSON SYTHESIS EDSON QUALITY

SOURCE "A" COLLECTOR COLLECTOR ONE ONLY

MECHANISM AND PROPERTIES OF
 Mechanism of electroosmotic purification of water. I.
 Effect of hydrogen- and hydroxyl-ion concentrations in
 the electrode chambers in the course of the process.
 I. S. Katsen and A. V. Virvg. *J. Applied Chem.* (U. S.
 S. R.) 8, 933-34 (1935).—The rates of flow of water in
 the anode and cathode chambers should be varied for each
 individual salt, depending on the relative concns. of the
 acid and base formed from the salt during electrolysis.
 Thus, in the case of Na_2SO_4 , the rates should be as 5:1
 in the anode and cathode chambers, resp., while in that of
 $\text{Ca}(\text{HCO}_3)_2$, the corresponding ratio is 1.6, and in the
 case of tap water it should rise from 4.5:1 in the first cell to
 7.0:1 in the last. H. C. A.

VIRVA, M.G. [Vyrva, M.H.]

Poultry cages with remote control. Mekh. sil'. hosp
12 no.11:26 N '61. (MIRA 14:11)

1. Ukrainskiy nauchno-issledovatel'skiy institut ptitsevodstva.
(Poultry houses and equipment)

AGRANOVSKIY, Yu., inzh.; VIR'VANSKIY, L., inzh.

New system of controlling the mechanisms of portal and floating
electric cranes. Rech. transp. 21 no.8:15-16 Ag '62.
(MIRA 18:9)

VIR'YANSKIY, Z., inzh.; KITSIS, S., inzh.

Valuable manual ["Automatic control of loading and unloading equipment in harbors" by K.A.Egorov. Reviewed by Z.Vir'ianskii, S.Kitsis].

Rech.transp. 20 no.6:58 Je '61. (MIRA 14:6)
(Cargo handling—Equipment and supplies) (Automatic control)
(Egorov, K.A.)

1. VIRYASON, K.
2. USSR (600)
4. Europe, Eastern - Economic Conditions
7. Successful development of the economy of the European people's democracies.
Vnesh. torg. 23, No. 3, 1953.
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

KLOCHER, V., VERTANOV, K.

Commerce

Economic cooperation of countries in the socialist camp, Vnesh. torg, 22 No. 2, 1952.

Monthly List of Russian Accessions, Library of Congress, May 1952. Unclassified.

MARTYNOV., V., VIRYASOV, K.

Albania - Economic Conditions

Progress of the people's Republic of Albania. Vnesh. torg. No. 1, Ja '52.

Monthly List of Russian Accessions, Library of Congress, March 1952, Unclassified.

AL. 1952. 22. Vnesh. torg, A.

Economic Policy

Economic cooperation of countries in the socialist camp, Vnesh. torg, 22, No. 2, 1952.

Monthly List of Russian Accessions, Library of Congress, May 1952. Unclassified.

304/100-5-3-2/37

AUTHORS: Vinyasov, N. M. and Pisareva, L. P.

TITLE: Measurement of the Ionisation of Fast Particles in the Nuclear Emulsion R-NIKFI (Izmereniye ionizatsii bystrykh zhar'its v yadernoy emul'sii R-NIKFI)

PERIODICAL: Priroda i Tekhnika Eksperimenta, 1958, Nr 2, pp 17-21 (USSR)

ABSTRACT: The ionisation produced by protons having energies of 148, 193, 250, 302, 454, 657 and π -mesons having an energy of 300 Mev has been measured and compared with theoretical calculations. The 660 ± 5 Mev proton beam at the United Institute of Nuclear Studies was used for this purpose. The lower energies were obtained by placing aluminium absorbers in the path of the beam and subsequent magnetic analysis. The maximum energy spread at 148 Mev and was 3%. At 657 Mev the energy spread was ± 5 Mev. The plates were 400 microns thick. In order to obtain information on the effect of the conditions of development each plate was cut into three equal pieces and each of the pieces was given a different time in the dry "hot" stage. The actual times were 25 minutes (under-developed), 40 minutes (normal) and 55 minutes (over-developed). It was found that for energies greater than 300 Mev the experimental data agree

Card 1/2

SOV/170-500-3/57

Measurement of the Ionisation of Fast Particles in the Nuclear Emulsion R-NIKFI.

well with theoretical calculations if the measurements are carried out with an accuracy of a few percent. In this region the grain density does not differ from true relative ionisation by more than 2%. For energies less than 300 Mev a correction is necessary for the effect of overlapping of grains. A method of applying this correction is described. The correction is carried out in terms of a parameter d which plays the role of an effective grain size. The following persons are thanked for their interest and help: M.I. Podgoretskiy, L.I. Fedorova, K.I. Zhabina and D.V. Makarcva. There are 5 tables and 1 Soviet, 2 English references.

ASSOCIATION: Ob'yedinenyy institut yadernykh issledovaniy (United Institute for Nuclear Studies)

SUBMITTED: May 6, 1957.

Card 2/2

1. Particles--Ionization
2. Measurement---Applications
3. Proton beams--Performance
4. Nuclear physics

83755

S/056/60/038/004/048/048
B006/B056

24.6900

AUTHORS:


Van Gan-chan, Van Tsu-tszen, Veksler, V. I., Viryasov, N.M.,
Vrana, I., Din Da-tsao, Kim Khi In, Kladnitskaya, Ye. N.,
Kuznetsov, A. A., Mikhui, A., Nguyen Din Ty, Nikitin, A. V.,
Solov'yev, M. I.

TITLE:

Production of a $\bar{\Sigma}^-$ -Hyperon¹⁹ by Negative π^- -Mesons With a
Momentum of 8.3 BeV/c

PERIODICAL:

Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960,
Vol. 38, No. 4, pp. 1356 - 1359

TEXT: In the present "Letter to the Editor", the authors give a detailed report on the case of a $\bar{\Sigma}^-$ -production and decay discovered by them for the first time among 40,000 bubble-chamber photographs. The chamber happened to be in a 13,700-oe magnetic field. The photograph concerned is represented as well as the track scheme. The tracks are numbered, and the individual stars are denoted as "point A, B, O, ..". The exact data of the tracks and stars, respectively, are given in tables (Table 1: "Kinematics at point A"; Table 2: "Kinematics at point B"; Table 3: 

Card 1/2

Production of a $\bar{\Sigma}^-$ -Hyperon by Negative
 π^- -Mesons With a Momentum of 8.3 Bev/c

83755
 S/056/60/038/004/048/048
 B006/B056

"Kinematics at point O"; and Table 4: "Kinematics at points O' and O" "). The individual tracks are identified, and the charges and momenta (measured and calculated) of the particles, the kinetic and mass energies, and the total energy are given. For the stars B and O also the energy balance is given. For B, the following is considered to be the most probable reaction: $\bar{n} + C \rightarrow He^4 + 4p + 3n + \pi^+ + \pi^- + n\pi^0$. For the primary star (Tables 3 and 4)² the following reaction is assumed: $\pi^- + C \rightarrow \bar{\Sigma}^- + K^0 + \bar{K}^0 + K^- + p + \pi^+ + \pi^- + \text{recoil nucleus}$. The lifetime of the $\bar{\Sigma}^-$ -hyperon was calculated to be $(1.18 \pm 0.07) \cdot 10^{-10}$ sec. G.A. Blinov and S. Z. Otvinovskiy are mentioned. There are 2 figures, 4 tables, and 4 references: 3 Soviet and 1 US.

ASSOCIATION: Ob'yedinennyy institut yadernykh issledovaniy (Joint
Institute of Nuclear Research)

SUBMITTED: March 24, 1960

Card 2/2

VIRYASOV, N. M.

82019
S/056/60/038/02/20/061
B006/B011

24.6810

AUTHORS: Viryasov, N. M., Vovenko, A. S., Vorob'yev, G. G.,
Kirillov, A. D., Kim Khi In, Kulakov, B. A., Lyubimov, A. L.,
Matulenko, Yu. A., Savin, I. A., Smirnov, Ye. V., Strunov,
L. N., Chuvilo, I. V.

TITLE: Channel for Antiprotons ¹⁹ With a Momentum of 2.8 Bev/c

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960,
Vol. 38, No. 2, pp. 445-448

TEXT: The authors of the present paper describe a channel built for the investigation of the interaction of antiprotons in a cloud chamber. Antiprotons were produced by 9-Bev protons in a target. Fig. 1 is a schematic representation of the channel described in the following. The antiprotons were identified from their velocity ($\beta = 0.95$) by means of three Cherenkov counters, each of which was provided with two photomultipliers of the type $\phi 3Y-33$ (FEU-33) whose efficiencies are specified in Table 1. The efficiencies attained with different coincidence combinations are given in Tables 2 and 3. Fig. 2 shows a block diagram of the electronic

Card 1/3

Channel for Antiprotons with a Momentum of 2.8 BeV/c

82019

8/056/60/038/02/20/061
B006/B011

system, and respective data are supplied in Table 4. The efficiency of the scheme described with respect to antiprotons is found to be 60-40%. Some tests are briefly described next. By the system discussed here, the authors determined the ratio of the number of \bar{p} with momenta of (2.8+15) BeV/c to the number of all remaining particles (which were chiefly π^- -mesons) from the beryllium target (36g/cm²) under the angles 0 and 7°, and from a copper target (~180 g/cm²) under 7° with respect to the primary proton beam (8.1 - 8.9 BeV). At an intensity of 10⁹p of the inner beam, an average of 1 \bar{p} was recorded within four minutes. Results:

Angle	target	proton beam intensity	particle number in the channel	relative number of antiprotons in the beam
0°	Be	10 ⁹	1000	(1.03±0.13).10 ⁻⁴
7°	Be	10 ⁹	~700	(1.37±0.18).10 ⁻⁴
7°	Cu	10 ⁹	~700	(2.42±0.53).10 ⁻⁴

The number of particles recorded in the channel agrees with data concern-
Card 2/3

44

Channel for Antiprotons With a Momentum of 2.8 Bev/c

S/056/60/038/02/20/061
B006/B011

ing 9-Bev proton interactions in emulsions (Ref. 4). The increase in the relative number of antiprotons in the transition from 0 to 7^0 in the laboratory system agrees with predictions made on the strength of the statistical theory. By considering pion absorption ($\sigma_t \sim 30$ mb) and antiproton absorption ($\sigma_t \sim 60$ mb) as well as the attenuation of the beam of primary protons ($\sigma_{in} \sim 30$ mb), the ratio of the differential production cross sections of \bar{p} and π^- -mesons with 2.8 Bev/c under 0° in the laboratory system is found to be

$$\frac{d^2\sigma_{\bar{p}}}{d\Omega dp} / \frac{d^2\sigma_{\pi^-}}{d\Omega dp} \approx 1.5 \cdot 10^{-4}.$$

There are 2 figures, 5 tables, and 4 references: 3 Soviet, 1 Italian, and 1 International (CERN).

ASSOCIATION: Ob'yedinennyy institut yadernykh issledovaniy
(Joint Institute of Nuclear Research)

SUBMITTED: September 3, 1959

Card 3/3

C/026/61/017/005/001/006
F050/F004

AUTHOR:

Wang, Kang-ch'ang (3769/3227/2490); Wang, Chu-hsiang (3769/4376/5046); Viryasov, N. M.; Ting, Ta-chao (0002/1129/6856); Kim, Hi-in (6855/5593/0088); Kladnitskaya, Ye. N., Kuznetsov, A. A.; Mikhul, A.; Nguyen, Din-ti (7086/0002/6337); Nikitin, A. V.; and Solov'yev, M. L.

TITLE:

Production of Ξ^- hyperons by the use of π^- mesons with a momentum of 7000 Mev/c and 8000 Mev/c

PERIODICAL:

Wu Li Hsueh Pao, v. 17, no. 5, 1961, 205-213

TEXT: The productive cross section σ ($\sigma = 3.6 \pm 2.5 \mu\text{b}/N$ at 6800 Mev/c, $\sigma = 10.6 \pm 4.4 \mu\text{b}/N$ at 8000 Mev/c), mass M_{Ξ^-} ($M_{\Xi^-} = 1317.0 \pm 2.2$ Mev), and lifetime τ_0 ($\tau_0 = 3.5 \pm 1.2 \times 10^{-10}$ sec) of Ξ^- hyperon were determined by the use of π^- mesons having momentums of 6800 Mev/c and 8000 Mev/c. In early investigations Ξ^- hyperons

Card 1/4

C/026/61/017/005/001/006

F050/F004

Production of Ξ^- hyperons by ...

were found by experiments with cosmic rays. A butane bubble chamber 24 liters in volume in a permanent magnetic field of 13700 gauss was used. The chamber was irradiated by a bundle of mesons with momentums of 7000 Mev/c and 8000 Mev/c. The result was 27,000 and 75,000 negatives obtained recording momentums of 6800 ± 600 Mev/c and 8000 Mev/c of π^- mesons. A three-dimensions amplifier and projector were used to trace the negatives twice and some negatives were traced three times. In the tracing process those events which could be classified with Ξ^- hyperon decay scheme $A \rightarrow V^0 + B$, $V^0 \rightarrow C + D$, by appearance were selected. The following standards were applied in the determination of Ξ^- hyperons: (1) V^0 must coincide with kinematics of the decay scheme $\Lambda^0 \rightarrow p + \pi^-$. (2) The refraction point must be within the Λ^0 decay plane. The vertical momentum of π^- meson and proton p, which came from Λ^0 decay relative to the projecting direction of Λ^0 , must be in equilibrium. (3) The Λ^0 decay particles should lie on the plane formed by particles A and B. (4) At the refraction point, the vertical momentum of particles Λ^0 and B particle must be in equilibrium. (5) The events must satisfy kinematics of Ξ^- hyperon decay scheme

$$\Xi^- \rightarrow \Lambda^0 + \pi^- + 65 \text{ bev}$$

Card 2/4

C/026/61/017/005/001/006
F050/F004

Production of Ξ^- hyperons by ...

Among all the events there were 11 events which satisfied all 5 standards. Three events coincided well with the kinematics of Ξ^- decay and have been classified with Ξ^- hyperon. Of all Ξ^- hyperons, one was obtained by the bundle of π^- mesons with 6800 Mev/c and then were obtained by the bundle of π^- mesons with 8000 Mev/c. The results of this experiment are listed in four tables: (1) Table 1 lists data of defined Ξ^- . All these data were average values which were obtained by using a microscope to measure two — four times independently. It also lists the decay energy Q and lifetime of all Ξ^- hyperons found in their own coordinate system. (2) Table 2 lists all data concerning the primary stars. These stars have been analyzed as the source of Ξ^- hyperons. (3) Table 3 lists the momentum p^* in a π^- N mass center system, vertical momentum p^\perp , and projecting angle θ^* of Ξ^- hyperons (suppose Ξ^- hyperons were produced by the impact of π^- mesons to free nuclei). The average vertical momentum ($p_{\Xi^-}^\perp$) of Ξ^- hyperon is equal to 318 ± 35 Bev. This value is approximate to the vertical momentum of proton and Λ hyperon. This table also lists the characteristics of the following angles: (a) θ_Λ^* is the projecting angle of Λ^0 which is projected out from Ξ^- hyperon decay process under its equilibrium

Card 3/4

Production of Ξ^- hyperons by ...

C/026/61/017/005/001/006
F050/F004

system. (b) θ_p^* is the projecting angle of p which was projected out from the decay process in its equilibrium system. (c) $\omega_{\Xi-\Lambda^0}$ is the intersection angle between Ξ^- and Λ^0 decay planes. In the distribution of θ_p^* and $\omega_{\Xi-\Lambda^0}$, no asymmetry was observed. (4) Table 4 lists the events which seems to be Ξ^- . Among these events, four were in the same plane and fourteen were in different planes. Most of these events in the same plane were induced by $\pi^+\pi$ mesons; the others in different plane events may have been induced by π^+ , π^- or K^- mesons. Thanks are extended to V. I. (Wei Ke Shih Lai Erh), I. V. (Chi Wei Lo), L. P. (Chi Lo Wei Yeh Fu), N. I. (Pa Pu La Fe), K. V. (Chi Ho Lo Fu), and L. N. (Chü Lao Yeh Fu). There are 3 figures and 4 tables. The English-language references read as follows: C. Franzinetti and G. Morpurgo. Suppl. Nuovo Cim. 6 (1957), 565; W. B. Fowler et al. Nuovo Cim. 11 (1959), 428.

SUBMITTED: March 20, 1961

Card 4/4

22121

S/056/61/040/003/004/031
B102/B202

24.6900 (1138, 1191, 1559)

AUTHORS: Wang Kang-ch'ang, Wang Ts'u-tseng, Viryasov, N.M., Ting
Ta-ts'ao, Kim Khi In, Kladnitskaya, Ye.N., Kuznetsov, A.A.,
Mikhul, A., Nguyen Din Ty, Nikitin, A.V., Solov'yev, M.I.

TITLE: Production of Ξ^- hyperons by π^- mesons with the
momenta 7 and 8 Bev/c

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki,
v. 40, no. 3, 1961, 734 - 740

TEXT: The authors present comprehensive material concerning the produc-
tion of Ξ^- -hyperons by negative high-energy pions in a 24-l propane bubble
chamber which was in a constant field of 13,700 oe. These experiments
have already been described in an earlier paper (ZhETF, 38, 426, 1960).
27,000 photographs were evaluated 2 - 3 times for pions with 6.8 ± 0.6 Bev/c
and 75,000 for pions with ≈ 8 Bev/c. The authors chose those events which
corresponded to a decay of cascade particles according to the mode

Card 1/14 S

22124

S/056/61/040/003/004/031

B102/B202

Production of Ξ^- hyperons by ...

$A \rightarrow V^0 + B$, $V^0 \rightarrow C + D$ as well as all singly-pronged stars from the vertex of which a V^0 particle departed. Altogether, 90 events were chosen; they were measured by means of УММ-21 (UIM-21) microscopes, and the results were evaluated by means of an electronic computer of the type "Ural"; 11 events of a Ξ^- -decay ($\Xi^- \rightarrow p^0 + \pi^- + 65 \text{ Mev}$) were identified according to rigorous criteria. The angular and momentum characteristics of the identified Ξ^- hyperons are given in Table 1. The events nos. 171-218 and nos. 19-179 are schematically shown in Figs. 1 and 2, respectively. The Table gives the data concerning the decay energy Q and the lifetime (until the decay) of the Ξ^- hyperons. The mean value of Q from the 11 Ξ^- decay events was $Q = 61.9 \pm 2.2 \text{ Mev}$ from which the hyperon mass $M_{\Xi^-} = 1317.0 \pm 2.2 \text{ Mev}$ was calculated. The mean lifetime was $\tau_0 = (3.5^{+3.4}_{-1.2}) \cdot 10^{-10} \text{ sec}$. The mean free path of the π^- mesons in Ξ^- -hyperon formation in propane was $l = (2.02^{+2.86}_{-0.84}) \text{ cm}$ for a momentum of 6.8 Bev/c and $l = (0.68^{+0.29}_{-0.20}) \text{ cm}$ for $\sim 8 \text{ Bev/c}$. Assuming that the Ξ^- -hyperon production cross section in nu-

Card 2/44 3

Production of Ξ^- hyperons by ...

22124
S/056/61/040/003/004/031
B102/B202

clei is $\sim A^{2/3}$, $\sigma = 3.6^{+2.5}_{-2.1} \mu b$ is obtained with 6.8 BeV/c and $\sigma = 10.6^{+4.4}_{-3.2} \mu b$ with ~ 8 BeV/c. Table 2 gives data on the primary stars with Ξ^- hyperon production. Table 3 shows the momentum (p^*), transverse momentum (p^*_\perp), angle of departure (Θ^*) of the various particles as well as the angle between the decay planes (ω°). Table 4 presents data on the "background" events (4 complanar and 4 noncomplanar ones) where V^0 particles were identified as Λ particles. Finally, the authors thank V.I. Veksler and I.V. Chuvilo for discussion, L.P. Zinov'yev, N.I. Pavlov, K.V. Chekhlov, L.N. Belyayev and various teams of technicians for their assistance. There are 3 figures, 4 tables, and 7 references: 5 Soviet-bloc and 2 non-Soviet-bloc.

ASSOCIATION: Ob'yedinennyy institut yadernykh issledovaniy
(Joint Institute of Nuclear Research)

SUBMITTED: September 30, 1960

Card 3/14 §

BELIYAKOV, V.A.; VAN YUN-CHAN [Wang Yung-chang]; VIRYASOV, N.K.;
DU YUAN'-TSAY [Lu Yuan-cai]; KIM KHI IN; KLADNITSKAYA,
Ye.N.; KUZNETSOV, A.A.; NGUYEN, DIN TY [Nguyen Dinh Tu];
PENEV, V.N.; SOKOLOVA, Ye.S.; SOLOV'YEV, N.I.

[Properties of π^0 -mesons produced together with strange
particles in π^-p and π^-c -interactions] Izuchenie
svoistv π^0 -mezonov, rozhdaushchikhsia so strannymi cha-
stitsami v π^-p i π^-c vzaimodeistviakh. Dubna, Ob"-
edenennyi in-t iadernykh issledovani, 1962. 10 p.

(MIRA 16:10)

(Mesons)

VEKSLER, V.I.; VIRYASOV, N.M.; VRANA, I.; KIM KH IN; Kladnitskaya, Ye.N.; Kuznetsov, A.A.; NGUYEN DIN TY; SOLOV'YEV, M.I.; KHOFMOKL', T.; CHEN LIN-YAN'; SARANTSEVA, V.R., tekhn. red.

[Polarization of Λ -hyperons produced in π^- -p-interactions at an energy of 7-8 Bev] Izuchenie poliarizatsii Λ -giperonov pri rozhdenii v π^- -p-vzaimodeistviakh s energiei 7-8 Bev. Dubna, Ob"edinennyi in-t iadernykh issl., 1962. 23 p. (MIRA 15:10)

(Hyperons---Decay) (Mesons---Decay) (Protons)

VIRYASOV, N.M.

BEYAROV, V.A., WANG HONG-CHANG, VERENIN, V.I., VIRYASOV, N.M., DU KUANG-TAT,
KIM HI IN, KLAHNITSEKAYA, Ye. N., KUZNETSOV, A.A., MIHEL, A., NIKEN, BIN TI, NIKEV, V.N.,
SOKOLOVA, Ye. B., SOLOVIEV, M. I.

"Study of ΛK and $K_1^0 K_1^0$ Pair Production in $\pi^- p$ and $\bar{\pi} E$ Interactions at the
7-8 GeV/c Momentum of $\bar{\pi}$ Mesons"

report presented at the Intl. Conference on High Energy Physics, Geneva,
4-11 July 1962

Joint Institute for Nuclear Research
Laboratory of High Energy Physics

BELIAKOV, V.A.; BOYADZHIYEV, A.V.; VAN YUN-CHAN[Wang Yung-ch'ang];
VEKSLER, V.I.; VIRYASOV, N.M.; KIM KHI IN; Kladnitskaya,
Ye.N.; Kuznetsov, A.A.; Mal'tsev, V.M.; NGUYEN, DIN TY;
PENEV, V.N.; SOLOV'YEV, M.I.; ZRELOVA, N.N., tekhn. red.

[Production of $\Lambda(\Sigma^0)$ -hyperons and K^0 -mesons in the inter-
action of 7 Gev. π^- -mesons with carbon] Rozhdenie $\Lambda(\Sigma^0)$ -
giperonov i K^0 -mezonov pri vzaimodeistvii π^- -mezonov s
energiei 7 Gev s uglirodом. Dubna, Ob"edinennyi in-t iader-
nykh issledovani, 1963. 18 p. (MIRA 17:2)

BELIAKOV, V.A.; VAN YUN-CHAN [Wang Yung ch'ang]; VEKSLER, V.I.;
VIRYASOV, N.M.; VRANA, I.; DU YUAN'-TSAY [Tu Yuan ts'ai];
KIM KHI IN; KLADNITSKAYA, Ye.N.; KUZNETSOV, A.A.;
MIKHUL, E.; NGUYEN, DIN TY; PATERA, I.; PENEV, V.N.;
SOKOLOVA, Ye.S.; SOLOV'YEV, M.I.; KHOFMOKL', T.;
MIKHUL, A.

[Production of Λ -hyperons and K^0 -mesons in π^-p -
interactions at an energy of 7-8 Bev] Issledovanie protses-
sov rozhdeniia Λ -giperonov i K^0 -mezonov v π^-p -vzaimo-
deistviakh pri energii 7-8 Bev. [n.p. n.d.] 26 p.
(MIRA 16:10)

(Mesons) (Hyperons)

8/056/63/044/001/017/067
B108/B180

AUTHORS: Veksler, V. I., Viryasov, N. M., Vrana, I., Kim Khi In,
Kladnitskaya, Ye. N., Kuznetsov, A. A., Nguyen Dia Ty,
Solov'yev, M. I., Khofmaki, T., Chen Ling-yen

TITLE: The polarization of Λ -hyperons produced in π^+p -interactions
at an energy of 7 - 8 Bev

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44,
no. 1, 1963, 84 - 99

TEXT: 60000 photographs were examined of the interaction of π^+ -mesons of
7 - 8 Bev/c with protons in a 24-liter propane bubble chamber in a
permanent magnetic field of 13,700 oe. Method and apparatus have already
been described (Wang Kang-oh'ang, M. I. Solov'yev, Yu. M. Shkolin. PTB, 1,
41, 1959; M. I. Solov'yev, Proc. of the 1960 Ann. Int. Conf. on High
Energy Physics at Rochester, p. 388; Wang Kang-oh'ang et al. ZhETF, 39,
1854, 1960). The Λ -hyperons were unpolarized during their production.
This follows from the fact that there is no asymmetry in the angular dis-
tributions of the protons from the decay of the Λ -hyperons relative to
the hyperon momentum. The angular distributions of the Λ -hyperon produc-
Card 1/2

The polarization of Λ -hyperons ...

S/056/63/044/001/017/067
B108/B180

tion planes relative to the production planes of the K-mesons and pions are nearly isotropic. The results agree with the law of conservation of parity in strong interactions involving strange particles. There are 13 figures and 4 tables.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: July 31, 1962

Card 2/2

S/056/63/044/002/007/065
B102/B186

AUTHORS: Belyakov, V. A., Wang Yung Ch'ang, Veksler, V. I.,
Viryasov, N. M., Vrana, I., Tu Yüan-ts'ai, Kim Khi Ying,
Kladnitskaya, Ye. N., Kuznetsov, A. A., Mikhul, E. Nguyen
Din Ty, Patera, I., Penev, V. N., Sokolova, Ye. S.,
Solov'yev, M. I., Khofmoki', T., Cheng Ling-yen, Mikhul, A.

TITLE: Investigation of Λ -hyperon and K^0 -meson production
processes in π^+p interactions at 7-8 BeV

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44,
no. 2, 1963, 431-443

TEXT: The c.m.s. momentum and angular distributions determined for the
 Λ and K^0 particles produced in πp interactions are given and discussed.
The measurements were made using a 24-liter propane bubble chamber in a
field of 13,700 oe. The total momentum spectrum of the Λ -hyperons
produced in the reactions

$$\pi^- + p \rightarrow \Lambda(\Sigma^0) + K^0 + n\pi, \quad (1)$$

$$\pi^- + p \rightarrow \Lambda(\Sigma^0) + K^+ + n\pi \quad (2)$$

Card 1/7

Investigation of Λ -hyperon ...

S/056/63/044/002/007/065
B102/B186

are shown in Fig. 1, compared with theoretical results. As it may be seen the statistical theory describes the experimental curve very well if the isobars and the cases with $p_p - p = \Delta < 700$ Mev are neglected.

$\Delta < 700$ Mev corresponds to $\sim 30\%$ of all Λ , these being produced in peripheral interactions. The Λ angular distribution has a distinct backward peak ($\bar{n}_\Lambda/\bar{n}_\Lambda = 0.18 \pm 0.02$). With increasing multiplicity n_g the agreement between experiment and statistical theory improves. The Λ angular distribution and the distribution with respect to p_\perp is virtually independent of n_g . The overall mean of the transverse momentum is 383 ± 12 Mev/c; for $\Delta < 700$ Mev, $\bar{p}_{\Lambda\perp} = 295 \pm 14$ Mev/c and for $\Delta \geq 700$ Mev, $\bar{p}_{\Lambda\perp} = 432 \pm 18$ Mev/c. For the $K^0(\bar{K}^0)$ mesons produced in the reactions

Card 2/7

S/056/63/044/002/007/065
B102/B186

Investigation of Λ -hyperon ...

$$\pi^- + p \rightarrow \begin{cases} K^0 + \Lambda(\Sigma^0) + \pi\pi, & (1) \\ K^0 + \bar{K}^0 + N + \pi\pi, & (3) \\ K^0 + K^- + N + \pi\pi, & (4) \\ \bar{K}^0 + K^+ + N + \pi\pi, & (5) \\ K^0 + \Sigma^\pm + \pi\pi. & (6) \end{cases}$$

the total momentum spectrum measured (Fig. 4) is weaker than that calculated according to the statistical theory. The angular distribution (Fig. 5) has, besides the isotropic part, a forward peak ($\bar{n}_{K^0}/\bar{n}_{K^0} = 1.61 \pm 0.15$). The

forward-backward ratio decreases with increasing n_s . For the charged pions arising in Λ -production events the momentum distributions are, for $p_\pi^* \geq 400$ Mev/c, well described by the statistical theory without taking the isobars into account; for $p_\pi^* < 400$ Mev/c it is higher than that obtained from theory. The angular distributions for $n_s = 2, 4, 6$ are characterized by

Card 3/7

Investigation of Λ -hyperon ...

S/056/63/044/002/007/065
B102/B186

$$\bar{n}_{\pi^+/\pi^-} = 1.10 \pm 0.12, \quad \bar{n}_{\pi^-/\pi^+} = 1.40 \pm 0.13.$$

The mean number of π^0 mesons produced per π^-p interaction with Λ production is 1.23 ± 0.14 . The angular distribution of π^- arising in stars with K^0 production has a flat forward maximum ($\bar{n}_{\pi^-/\pi^+} = 1.10 \pm 0.10$). The mean number of charged particles produced together with Λ is $n_s = 2.22 \pm 0.13$ which agrees closely with the statistical theory without the isobars. The main part of Λ and K^0 is produced in two-pronged stars. The admixture of $K^0 \Sigma^\pm$ pairs amounts to less than 20% of the number of $K^0 K^- + K^0 K^+$ pairs. The momentum distribution of charged pions from π^-p interactions with Λ -hyperon production are characterized by $\bar{p}_{\pi^+}^* = 425 \pm 16$ Mev/c and $\bar{p}_{\pi^-}^* = 444 \pm 15$ Mev/c. From a comparison of these angular distributions it is concluded that processes involving ΛK or $K\bar{K}$ pair production are more central than the usual processes of multiple pion production. If one divides the π^-p interactions with strange particle production into head-on

Card 4/7

Investigation of Λ -hyperon ...

S/056/63/044/002/007/065
B102/B186

and peripheral collisions one can say that those involving $K\bar{K}$ pair production are rather of the head-on type than those with ΛK pair production. There are 15 figures and 2 tables.

ASSOCIATION: Ob'yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: July 31, 1962

Fig. 1. Total momentum spectrum of hyperons; dashed line: without correction for recording probability; shaded area: events with $\Delta < 700$ Mev, curves obtained from statistical theory with (I) and without (II) isobars, and without the events with $\Delta < 700$ Mev (II').

Fig. 4. K^0 total momentum spectrum.

Fig. 5. K^0 total angular distribution.

Card 5/7

1 a
2 e
t

L 10238-63

FCS(f)/EFT(=)/EDS--AFFTC/ASD

ACCESSION NR: AP3000037

S/0056/63/044/005/1474/1480

AUTHOR: Belyakov, V. A.; Wang Yung-ch'arg; Viryasov, N. M.; Tu Yuan-ts'ai;
Kim Khi In; Kladnitskaya, Ye. N.; Kuznetsov, A. A.; Nguyen Din Ty; Penev, V. N.;
Sokolova, Ye. S.; Solov'yev, M. I.

TITLE: A study of the ¹⁹properties of neutral pions produced with strange particles in negative pion proton and negative pion carbon interactions.

SOURCE: Zhurnal eksper. i teoret. fiziki, v. 44, no. 5, 1963, 1474-1480

TOPIC TAGS: Neutral pions, strange particle interactions

ABSTRACT: An earlier investigation on the production of strange particles by 7-8 Bev negative pions on hydrogen and carbon was continued with a 24 - liter propane bubble chamber. The properties of the neutral pions inferred from the photons accompanying the LAMBDA hyperon and neutral kaon production are given and are compared with the properties of the pions (positive and negative) emitted in LAMBDA and neutral-kaon production processes. In calculating the total number of photons, corrections were introduced for the loss of photons

Card 1/2

L 10238-63

ACCESSION NR: AP3000037

8

emitted at large azimuthal angles and for the asymmetry of the incident beam relative to the longitudinal axis of the chamber. The possibility of a resonance with radiative decay is noted. "In conclusion, the authors wish to thank Academician V. I. Veksler, Professor Chang Weng-yu, M. I. Podgoretskiy, A. M. Baldin, A. V. Nikitin, V. B. Lyubimov and Yen Wu-kuang for useful discussions and many valuable remarks, the staff of the computation center for the calculations, and the laboratory assistants for the measurements. Orig. art. has: 4 figures, 9 formulas, and 4 tables.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: 07Dec62

DATE ACQ: 12Jun63

ENCL: 00

SUB CODE: PH

NR REF SOV: 008

OTHER: 004

clm/oh
Card 2/2

L 15462-63

FCS(r)/EWT(m)/BDS AFPTC/ASD

ACCESSION NR: AP3005248

S/0056/63/045/002/0088/0089 64

AUTHORS: Belyakov, V. A.; Veksler, V. I.; Viryssov, N. M.; Vrana, I.; Kin Khi In;
Kladnitskaya, Ye. N.; Kuznetsov, A. A.; Mikhul, A.; Nguyen Din Ty*; Solov'yev,
M. I.; Hofmohl, T.; Ch'eng Ling-yen

TITLE: Antilambda hyperon production by 7-8 GeV negative pions on hydrogen

SOURCE: Zhur. eksper. i teoret. fiz., v. 45, no. 2, 1963, 88-89

TOPIC TAGS: hyperon production, antilambda, negative pion decay, cross section

ABSTRACT: The production and decay of $\bar{\Lambda}$ hyperons by 7--8 BeV negative pions are reported, on the basis of 42 V^0 events in which the momentum of the negative particle from the decay was greater than the momentum of the positive particle and the transverse momentum of the decay products was less than or equal to 100 MeV. Selection of the $\bar{\Lambda}$ hyperons was by kinematic criteria, measurement of ionization, and determination of the δ -electron energy. The cross section for the production of $\bar{\Lambda}$ hyperons is found not to differ much from the cross section of Λ production, or about 3 μ b. Orig. art. has 1 figure and 1 table.

Card 1/2

L 15462-63

ACCESSION NR: AP3005248

ASSOCIATION: Ob"yedinenny*y institut yaderny*kh reaktsiy (Joint Institute of Nuclear Research)

SUBMITTED: 13Mar63

DATE ACQ: 06Sep63

ENCL: 00

SUB CODE: PH

NO REF SOV: 003

OTHER: 002

Card 2/2

BELYKOV, V.A.; VAN YUN-CHAN [Wang Yung-ch'ang]; VEKSLER, V.I.; VIRYASOV, N.M.;
DU YUAN'-TSAY [Tu Yuan-ts'ai]; KIM KHI IN; Kladnitskaya, Ye.N.;
KUZNETSOV, A.A.; NGUYEN DIN TY; PENEV, V.N.; SOLOV'YEV, M.I.

Polarization of \sqrt{s} -hyperons produced in π^+p -interactions at 7 Bev.
Zhur. eksp. i teor. fiz. 45 no.2:90-92 Ag '63. (MIRA 16:9)

1. Ob'yedinennyy institut yadernykh issledovaniy.
(Nuclear reactions) (Hyperons)

ACCESSION NR: AP4037568

S/0056/64/046/005/1586/1597

AUTHORS: Belyakov, V. A.; Boyadzhiev, A. V.; Wang, Yung-ch'ang;
Veksler, V. I.; Viryasov, N. M.; Kim Khi In; Kladnitskaya, Ye. N.;
Kuznetsov, A. A.; Mal'tsev, V. M.; Nguyen Din Ty*; Penev, V. N.;
Solov'yev, M. I.

TITLE: Production of $\Lambda(\Sigma^0)$ hyperons and K^0 mesons in interaction
between 7 GeV negative pions and carbon

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 5, 1964, 1586-1597

TOPIC TAGS: Λ hyperon, Σ^0 hyperon, neutral kaon, negative pion
carbon interaction, hyperon production, kaon production, pion proton
interaction, bubble chamber, secondary interaction fraction, angular
distribution, momentum distribution, cascade model

ABSTRACT: The production of $\Lambda(\Sigma^0)$ hyperons and K^0 mesons by negative
pions on carbon was investigated and compared with earlier results

Card 1/6

ACCESSION NR: AP4037568

(ZhETF v. 40, 464, 1961) from π^-p interactions at the same pion momentum. A 24-liter propane bubble chamber in a constant field of 13,700 Oe was used in accordance with a procedure described before (ZhETF, v. 38, 426, 1960). The purpose of the experiment was to estimate the fraction of the secondary interactions. An estimate was made for the first time of the fraction of strange particles produced in the secondary processes. The momentum spectrum of the Λ hyperons (in the pion-nucleon center of mass system) was compared with the spectrum for the π^-p interactions. The following distribution of events over the reaction channels was obtained

	γ^*K^0	γ^*K^+	$K^0\bar{K}^0$	$K^0K^-+K^+\bar{K}^0$	$\Sigma^\pm K^0$	$\gamma^*\gamma^*KK^0$
Number of events	427 ± 60	223 ± 61	147 ± 52	323 ± 127	$80 \pm 31^{(3)}$	40
Cross section, mb	$4,8 \pm 0,8$	$2,5 \pm 0,9$	$1,7 \pm 0,6$	$3,6 \pm 1,4$	$0,9 \pm 0,4$	0,04

and the cross section for each interaction event with the carbon was calculated to be 0.0113 mb. This yielded the following cross

Card 2/6

ACCESSION NR: AP4037568

sections

$$\sigma(\pi^0 \Lambda^0) = 7,3 \pm 1,2 \quad \text{and} \quad \sigma(K^0 \bar{\Lambda}) = 5,3 \pm 1,5$$

The good agreement between the calculated and experimental values of the spectra of the Λ hyperons and K^0 mesons gives grounds for assuming that the cascade model holds true for these phenomena. It also is concluded that the previously observed hard part of the momentum spectrum of the Λ hyperons in the pion-nucleon center of mass system in πp interactions is due to an admixture of carbon events, and that the role of the secondary processes which lead to the production of strange particles is quite appreciable even on the carbon nucleus.

"The authors are grateful to I. Klugov and M. Shneyeberger for help at the beginning of the work, to V. S. Barashenkov, I. V. Chuvilo, and M. I. Podgoretskiy for discussion and valuable remarks, to Ye. P. Zhidkov, G. A. Ososkov, and K. N. Danilova for help with the calculations, and to the laboratory group for the measurements." Orig.

Card 3/6

ACCESSION NR: AP4037568

art. has: 5 figures, 7 formulas, and 1 table.

ASSOCIATION: Ob"yedinenny*y institut yaderny*kh issledovaniy
(Joint Institute of Nuclear Research)

SUBMITTED: 02Dec63

DATE ACQ: 09Jun64

ENCL: 02

SUB CODE: PH

NR REF SOV: 013

OTHER: 008

Card

4/6

ACCESSION NR: AP4037568

ENCLOSURE: 01

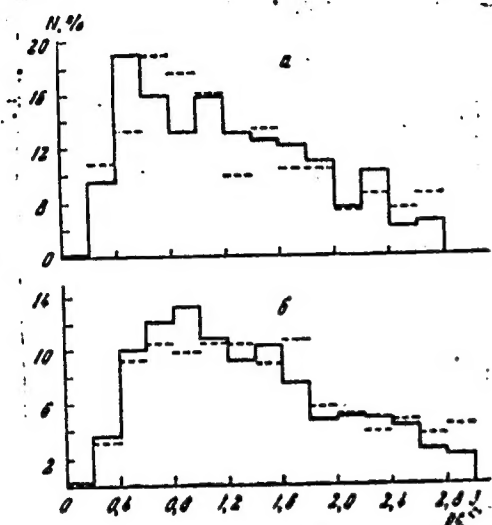
Particle type	Particle number	Particle type	Particle number
Λ	198	$\Lambda + \Lambda$	1
K^0	248	$K^0 + K^0 + \Lambda$	1
$\Lambda + K^0$	45	$K^0 + (\Lambda + K^0)$	5
$\Lambda + \bar{K}^0$	39	$\Lambda + (\Lambda + K^0)$	1
$K^0 + \bar{K}^0$	9	$\Lambda + \Lambda + K^0$	3

Distribution of events

Card 5/6

ACCESSION NR: AP4037568

ENCLOSURE: 02



Momentum distribution of Lambda hyperons (a) and kaons (b) from pion-carbon interaction at 7 GeV/c

solid - experimental
dashed - Monte Carlo calculation

Card. 6/6

ACCESSION NR: AP4042554

S/0056/64/046/006/1967/1978

AUTHORS: Balyakov, V. A.; Veksler, V. I.; Viryasov, N. M.; Kladnitskaya, Ye. N.; Kopylov, G. I.; Penev, V. N.; Sokolova, Ye. S.; Solov'yev, M. I.

TITLE: Pion resonances produced simultaneously with strange particles in negative pion proton interactions at 7.5 GeV/c

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 6, 1964, 1967-1978

TOPIC TAGS: pion, negative pi meson, strange particle, resonance scattering, omega meson, proton reaction

ABSTRACT: Continuing a series of earlier research on the generation of strange particles and pions in a beam of 7.5 GeV/c negative pions (ZhETF v. 43, 815, 1962; v. 44, 431 and 1474, 1963; Proc. 1960 Rochester Conf., 1961, p. 388), the authors investigated with the aid of 24-liter propane bubble chamber the pion resonances produced simul-

Card 1/3

ACCESSION NR: AP4042554

taneously with strange particles. Pion resonances produced in interactions of the type

$$\pi^- + p \rightarrow \begin{cases} \Lambda(\Sigma^0) + K^0 + m\pi \\ \Lambda(\Sigma^0) + K^+ + m\pi \\ K^0 + \bar{K}^0 + p(n) + m\pi \\ K^0 + K^- + p(n) + m\pi \\ \bar{K}^0 + K^+ + p(n) + m\pi \\ K^0 + \Sigma^+ + m\pi \\ K^0 + \Sigma^- + m\pi \end{cases}$$

were investigated (m -- number of pions). Simultaneous production of ρ^0 mesons and ΛK pairs was observed in events characterized by a charged particle multiplicity $n_s = 4$ and having cross sections of 20 ± 8 microbarns. Cross sections for the production of ω and η resonances are presented. It is concluded that the four-pion effective

Card 2/3

ACCESSION NR: AP4000554

mass distribution has a peak at 1340 MeV and several possible reasons for this peak are suggested. "We are greatly indebted to M. I. Podgoretskii and I. V. Chuvilo for assistance and valuable discussion, to Tu Yuan-ts'ao, A. A. Kuznetsov, Kim Hi In, Nguyen Dinh Tu, and Wang Yung-ch'ang for participating in the first stage of the work, to N. N. Govorun and N. F. Markova of the computing center of OIYaI and to G. M. Korotkova, S. N. Komarova and L. M. Zhukova for measurements and calculations." Orig. art. has: 11 figures, 11 formulas, and 1 table.

ASSOCIATION: Ob'yedinenny'y institut yaderny*kh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: 30Dec63

DATE ACQ:

ENCL: 00

SUB CODE: NP

NR REF SOV: 009

OTHER: 012

Card 3/3